

$$(19) \quad \frac{2}{3} + 5^2$$

$$5^2 + \frac{2}{3}$$

$$3x^5$$

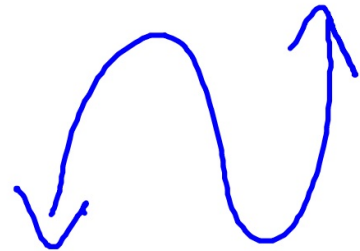
$$(14) \quad x(x+5) - 5(x+5)$$

$$x^2 + \cancel{5x} - \cancel{5x} - 25$$

$$x^2 - 25$$

$$(6) \quad \cancel{x^2} + 3x - \cancel{4x^3}$$

$$-4x^3 + x^2 + 3x$$



Bellwork: 2/7/13

Put the function in standard form. Then determine the degree, number of terms, end behavior and number of u-turns.

1) $y = (2x^2 - 5)(x^2 - 1)$

Stand. Form: $2x^4 - 7x^2 + 5$

$$2x^4 - 2x^2 - 5x^2 + 5$$

$$2x^4 - 7x^2 + 5$$

Degree: 4 Terms: 3

End. Beh: $\uparrow\uparrow$ U-turns: 3

even \oplus

Graphing Polynomials in Factored Form: roots = answers = zeroes = x intercepts

1) $y = 1(x+2)(x-1)(x-3)$

Step 1: Find the roots x intercepts

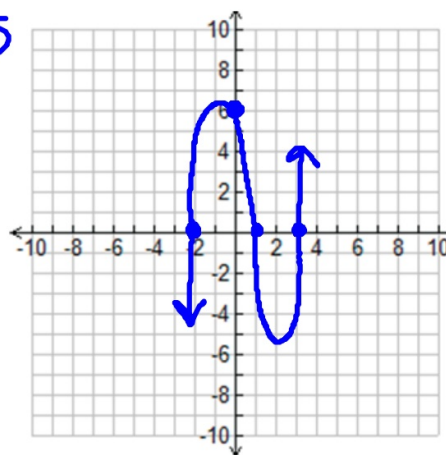
$$x+2=0 \quad x-1=0 \quad x-3=0$$

$$x=-2 \quad x=1 \quad x=3$$

Step 2: Find y-intercept ($x=0$)

$$(0+2)(0-1)(0-3)$$

$$(0, 6)$$



Step 3: Determine end behavior

$$1x^3 \text{ odd } \oplus \downarrow \uparrow$$

2 turns

Graph!

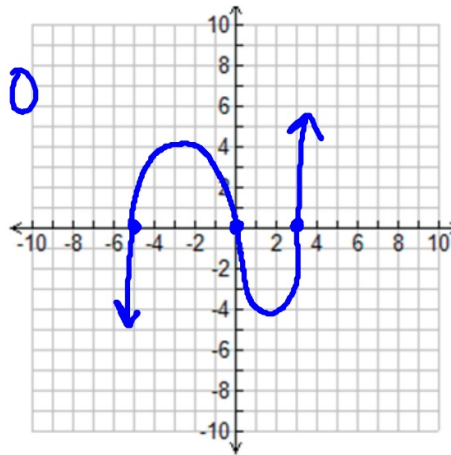
$$2) y = x(x-3)(x+5)$$

roots: $x=0$ $x-3=0$ $x+5=0$

$$x=0 \quad x=3 \quad x=-5$$

y int: $x=0$
 $0(0-3)(0+5)$
 $(0,0)$

EB: $|x^3$ odd \oplus
 $\downarrow \uparrow$
 2 turns

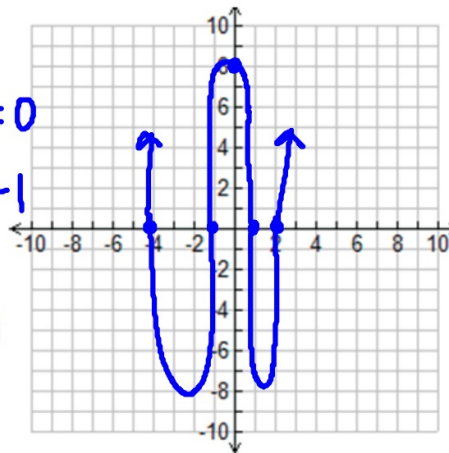


$$3) y = (x-1)(x-2)(x+4)(x+1)$$

roots:
 $x-1=0$ $x-2=0$ $x+4=0$ $x+1=0$
 $x=1$ $x=2$ $x=-4$ $x=-1$

y int: $(0-1)(0-2)(0+4)(0+1)$
 $(0,8)$

EB: $|x^4$ even \oplus
 $\uparrow \uparrow$ 3 turns



4) $y = -x(x-3)(x+7)$

THIS IS
HOMEWORK!

